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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/837,072	04/18/2001	Viktor Brost	655.00955	8832

7590

02/14/2002

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EXAMINER

DUONG, THO V

ART UNIT

PAPER NUMBER

3743

DATE MAILED: 02/14/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/837,072

Applicant(s)

BROST ET AL.

Examiner

Tho V Duong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 3-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 11-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4 and 6 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

Claims 3-10 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election of species of figure 4C was made **without** traverse in Paper No. 8.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claimed subject matter of the step of inserting a forming tool into the one end of each of the tubes to form the bifurcation after assembling the radiator core must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 12 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claimed subject matter of " the step of adapting one end of each of said tube ...by inserting a forming tool into said one end of each of

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said plurality of tubes" is not disclosed in the drawings in such a way for the examiner to understand.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bengtsson (US 4,313,494) in view of D. M. Donaldson (US 3,265,126). Bengtsson discloses (figure 1) a radiator comprising a radiator core defining a front and a rear face including a plurality of tubes (1); a collecting tank attached to the core in a fluid tight manner to provide fluid communication between the tubes (1) and the collecting tank; the tubes each having a pair of side walls (2,3) extending through the core and joined by end walls (4) at the front and rear faces of the core wherein the end walls (4) of each tube are bifurcated for a distance at one end of the tube; both side walls are directed away from each other to join in a fluid tight manner with the side wall of an adjacent tube in the core. Bengtsson does not disclose that layers of fins interleave between the tube and the collecting tank extends past the bifurcation. Donaldson discloses (figure 1 and column 1, lines 60-65) that a radiator having a plurality of fins (13) interleaving between tubes (12); a collecting tank (10) is attached to a core in a fluid tight manner wherein the tank (10) extends over the front and rear faces of the core and pasting the joined end tube section (54) to direct air away from tube end section and

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into the tube and fins (13) areas to enhance the heat transfer rate of the radiator. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Donaldson's teaching in the Bengtsson's radiator to enhance the heat transfer rate of the radiator.

Conclusion

The non-application of art against claims 12-13 should not be construed as an indication that the claims 12-13 contain allowable subject matter.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Jamison et al. (US 6,311,768) discloses a clip on manifold having bifurcation at tube ends.

C. M. Cederstrom et al. (US 3,016,230) discloses a heat exchange assembly that has widen end tube joined together.

Ghiani (US 6,068,050) discloses a heat transfer device that has tube ends are widened in the area of the collecting tank.

Ghiani (US 6,012,512) discloses a heat exchanger that has widened tube ends at different angle joined together.

Ohashi et al. (US 5,457,885) discloses a heat exchanger that has tube ends bifurcated.

Von Roll (DT 1451258) discloses a heat exchanger consisting of number of tubes having bifurcated ends.

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Any inquiry concerning this communication or earlier communication from the examiner should be directed to Tho Duong whose telephone number is (703)305-0768. The examiner can normally be reached on from 8:30 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Bennet, can be reached on (703)308-0101. The fax phone number for the organization where this application or proceeding is assigned is (703)308-7764.

Any inquiry of a general nature or relating to status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0861.

Tho Duong

February 8, 2002



Henry Bennett
Supervisory Patent Examiner
Group 3700